REMARKS

A. Status of the Claims

Claims 1-43 were pending at the time of the Action. Claims 1-23 and 27-31 have been cancelled. Claims 32, 36, 39 and 41 have been amended (see Appendix A). Thus, claims 24-26 and 32-43 are presented for reconsideration. All of the pending claims are reproduced in Appendix B for the examiner's convenience.

B. Rejection Under 35 U.S.C. §112, Second Paragraph

The Action rejects claims 1-5 under 35 U.S.C. §112, second paragraph as allegedly "failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." The Action asserts that it is not clear as to which carbon atom is being referred to because there are various carbon atoms between various nitrogen atoms in a polyamine. The Action further asserts that claim 3 is "so unclear as to come to any conclusion of what is being claimed." Applicant respectfully traverses this rejection, but cancellation of the claims renders the rejection moot.

The Action also rejects claims 16-20 under 35 U.S.C. §112, second paragraph as allegedly indefinite. According to the Action, the claim does not set forth any steps involved in the method/process, and thus it is unclear what method/process applicant is intending to encompass. Applicant respectfully traverses this rejection, but cancellation of the claims renders the rejection moot.

C. **Rejection Under 35 U.S.C. §102(b)**

The Action rejects claims 1-12, 15, 22-26, and 28-43 under 35 U.S.C. §102(b) as being anticipated by Huber *et al.* The Action asserts that Huber "in the title reads on the same compound as claimed herein, thus anticipating the claims." Claims 1-23 and 27-31 have been canceled. As to claims 24-26 and 32-43, applicants respectfully traverse this rejection.

Looking at each of the independent claims, there are one or more limitations found in the claims that are not present in DESC, the compound described by Huber *et al.* and cited against the present claims. For example, in claim 24, R_1 or R_2, and R_{18} or R_{19} are methyl. DESC only has hydrogens at these positions. Claims 25 and 26 depend from claim 24, and thus carry with them its limitations. Thus, DESC does not anticipate these claims. Claim 32 (as amended to remove "amides"), and claim 33 which depends therefrom, is distinct from the amide-containing DESC. Claims 34, 36 and 38 (and claims dependent therefrom) all have the linker attached to a nitrogen group. DESC has the linker molecule attached through a carbon, providing a clear point of distinction for these claims as well.

In light of the foregoing explanation, applicants respectfully submit that the rejected claims are not anticipated by Huber *et al.* Reconsideration and withdrawal of the rejection is respectfully requested.

D. **Rejection Under 35 U.S.C. §103(a)**

The Action rejects claims 1-15 and 21-43 under 35 U.S.C. § 103(a) as being unpatentable over Huber *et al.* The Action asserts that Huber teaches structurally similar compounds as claimed in the instant application. According to the Action, it would have been "*prima facie* obvious to one of ordinary skill in the art at the time the invention was made to obtain

compounds within the structure of the reference, because they are structurally so similar to those claimed herein, with the reasonable expectation of achieving a successful pharmaceutical composition, absent evidence to the contrary." Claims 1-23 and 27-31 have been canceled. As to claims 24-26 and 32-43, applicants respectfully traverse this rejection.

As stated above, each of the rejected claims is distinguishable from the DESC compound of Huber *et al.* As such, the burden lies with the examiner to establish both motivation and a specific suggestion, ***in the cited art***, to make the changes necessary to arrive at the claimed invention. The examiner has made no such showing here, instead relying only on a general statement of structural similarity. In fact, the examiner suggests, albeit it incorrectly, that the claimed invention encompasses "compounds within the structure of the reference." This clearly is not the case, as is explained above in the section addressing the §102 rejection. Thus, the rejection is flawed from both legal and factual standpoints.

Thus, it is respectfully submitted that the examiner has not come forward with sufficient evidence to establish a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection is, therefore, respectfully requested.

E. Rejection Under 35 U.S.C. §101

i) Rejection Of Claims 16-20

The Action rejects claims 16-20 under 35 U.S.C. §101 for allegedly improperly defining a process. According to the Action, "the claimed recitation of a use, without setting forth any steps involved in the process, results in improper definition of a process." Cancellation of these claims renders the rejection moot.

ii) Rejection Under 35 U.S.C. § 101 (Double Patenting)

The Action rejects claims 13-15 under 35 U.S.C. §101 as allegedly claiming the same invention as that of claims 13-15 of U.S. Patent 6,083,496. Cancellation of these claims renders the rejection moot.

F. Rejection For Judicially-Created Obviousness-Type Double-Patenting

The Action rejects claims 1-12 and 21-43 under the judicially-created doctrine of obviousness-type double-patenting over claims 1-15 of U.S. Patent 6,083,496 as allegedly improperly extending the "right to exclude" already granted in the above patent if the instant claims are granted. According to the Action, the subject matter claimed in the instant application is fully disclosed in the patent. The Action further asserts that the generic structure of the instant claims extensively overlap those of the above patent. Applicant respectfully traverses this rejection, but cancellation of claims 1-23 and 27-31 renders the rejection moot with respect to these claims. At such time as the claims are otherwise held allowable, applicants agree to submit a terminal disclaimer.

G. Conclusion

Applicants believe the foregoing to be a full and complete response to the outstanding Office Action. In view of the above remarks, it is respectfully submitted that the present application is in condition for allowance, and an early notification to that effect is earnestly solicited. The examiner is invited to contact the undersigned attorney at 512-536-3184 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

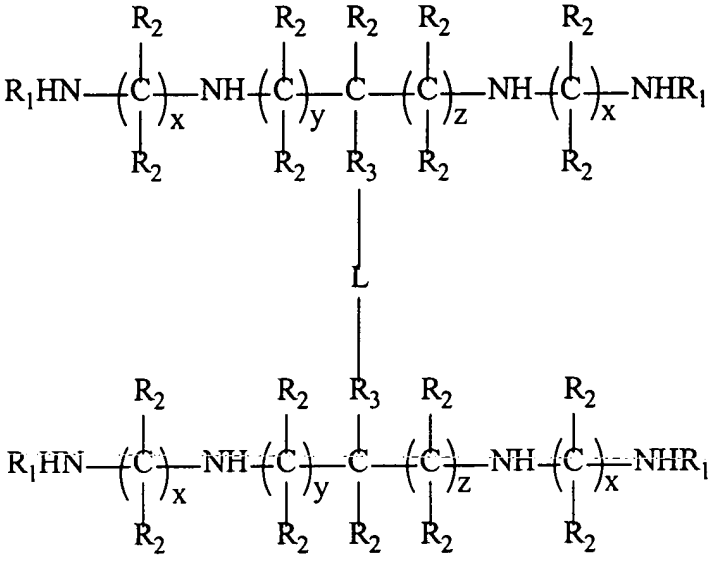
Steven L. Highlander
Reg. No. 37,642
Attorney for Applicants

FULBRIGHT & JAWORSKI, L.L.P.
600 Congress Avenue, Suite 2400
Austin, Texas 78701
512-474-5201

Date: December 27, 2001

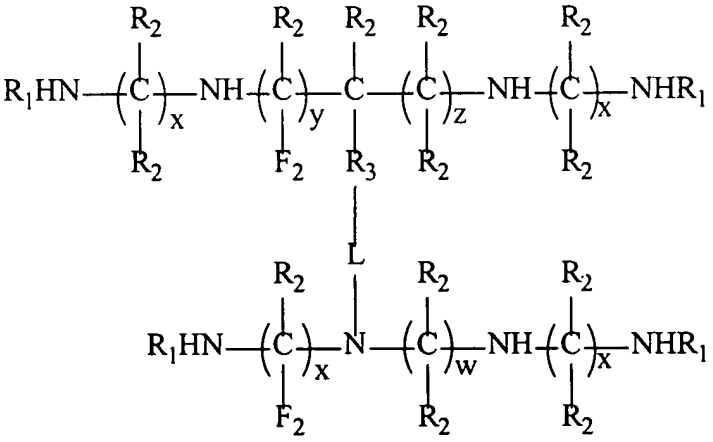
APPENDIX A: MARKED UP COPY OF AMENDED CLAIMS

32. (Amended) A synthetic derivative of a polyamine comprising structure 1:



where R_1 is H, methyl, ethyl or propyl, R_2 is H, methyl, ethyl or propyl, x is greater than 2 and less than 5 ($2 < x < 5$), and the sum of y + x is greater than 2 and less than or equal to 6 ($2 \leq y + x \leq 6$), R_3 is an alkyl, [amide,] keto, ether, thioether, phosphono or sulfonyl group; and L is a linker as defined in claim 24.

36. (Amended) A synthetic derivative of a polyamine comprising structure 3:



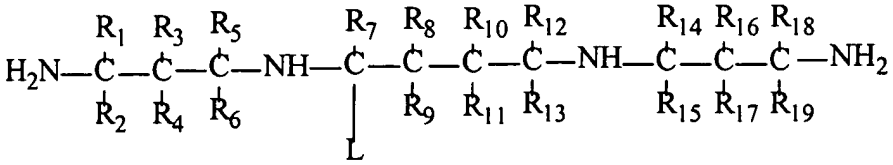
where R_1 is H, methyl, ethyl or propyl, R_2 is H, methyl, ethyl or propyl, x is greater than 2 and less than 5 ($2 < x < 5$), w is greater than 2 and less than 8 ($2 < w < 8$), R_3 is an alkyl, [amide,] keto, ether, thioether, phosphono or sulfonyl group; the sum of y + x is greater than or equal to 6 ($2 \leq y + x \leq 6$), and L is a linker as defined in claim 24.

39. (Amended) The synthetic derivative of claim 38, wherein the chemical [liker] <u>linker</u> is a α,ω-diamine cross-linker.

41. (Amended) The synthetic derivative of claim 38, wherein R_1 is H, x is 3 or 4, y is 3 or 4, and[f] x + y is greater than 5 and less than 9.

APPENDIX B: CLEAN COPY OF PENDING CLAIMS (UNOFFICIAL)

24. A synthetic derivative of a polyamine comprising:

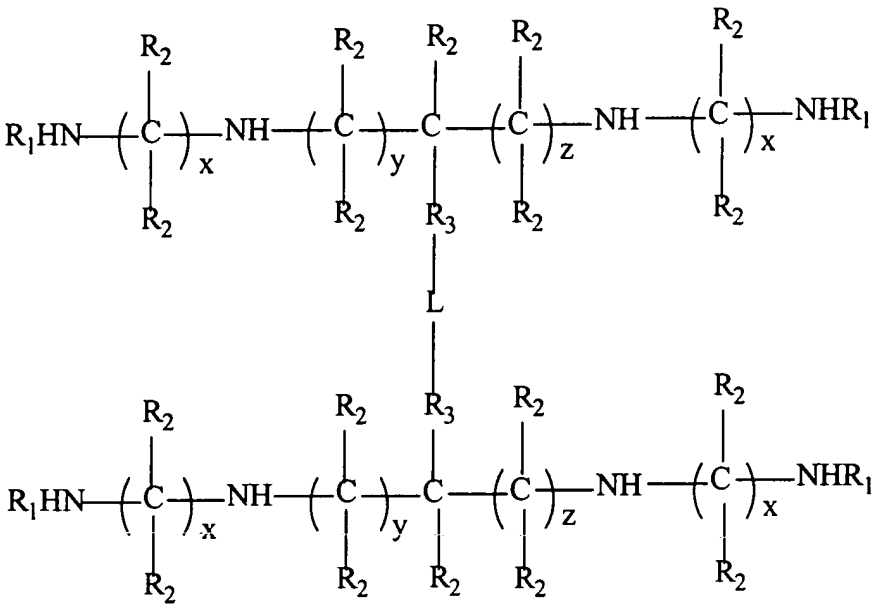


wherein R_1 or R_2 and R_{18} or R_{19} is methyl, R_3 through R_{17} is H or methyl, and L is a linker comprising a chemical entity covalently attached to said polyamine and capable of modifying the membrane permeability of a polyamine analog.

25. The derivative of claim 24 wherein the L is a α,ω-diamine cross-linker.

26. The synthetic derivative of Claim 25 wherein at least one of R_1 and R_2 and one of R_{18} and R_{19} are methyl groups.

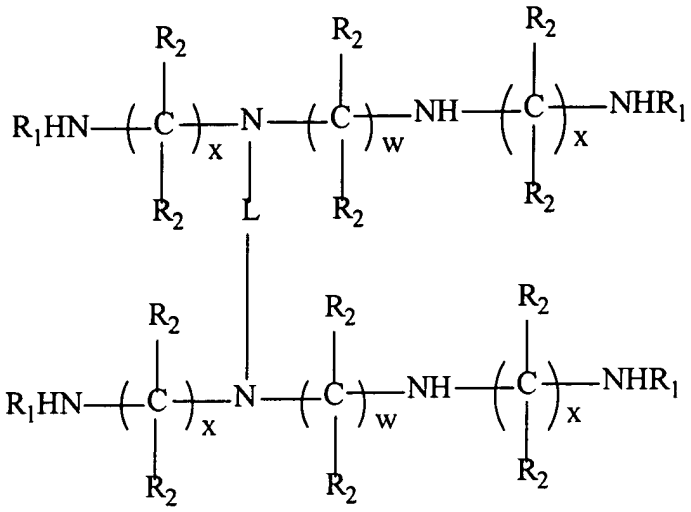
32. A synthetic derivative of a polyamine comprising Structure 1:



wherein R_1 is H, methyl, ethyl or propyl, R_2 is H or methyl, x is greater than two and less than five ($2 < x < 5$), and the sum of y + z is greater than 2 or less than or equal to 6 ($2 \leq y + z \leq 6$), R_3 is an alkyl, amide, keto, ether, thioether, phosphono or sulfonyl group; and L is a linker as defined in claim 24.

33. The synthetic derivative of claim 32 wherein x is 3, R_1 is hydrogen, R_2 is a methyl (CH_3) group for the carbon atom located next to each NH-R_1 group, and is a hydrogen atom for all other carbons, y + z = 3, and L is $-CH_2\text{-}HN(CH_2)_nNH\text{-}CH_2-$, where n = 3, 4, 5 or 6.

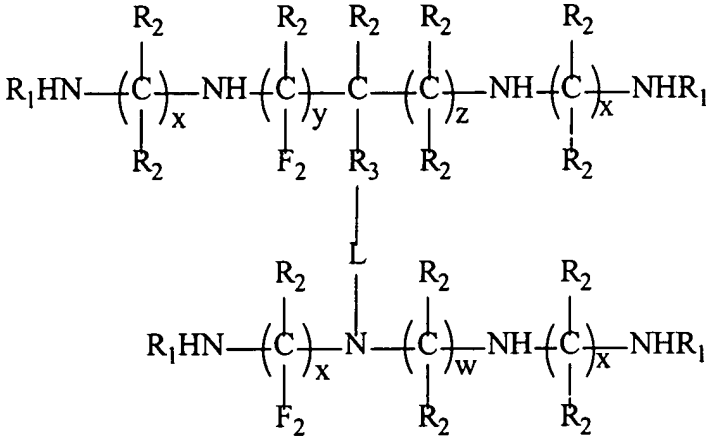
34. A synthetic derivative of a polyamine comprising Structure 2:



wherein R_1 is H, methyl, ethyl or propyl, R_2 is H or methyl, x is greater than two and less then five ($2 < x < 5$), w is greater than 2 and less than 8 ($2 < w < 8$) and L is a linker as defined in claim 24.

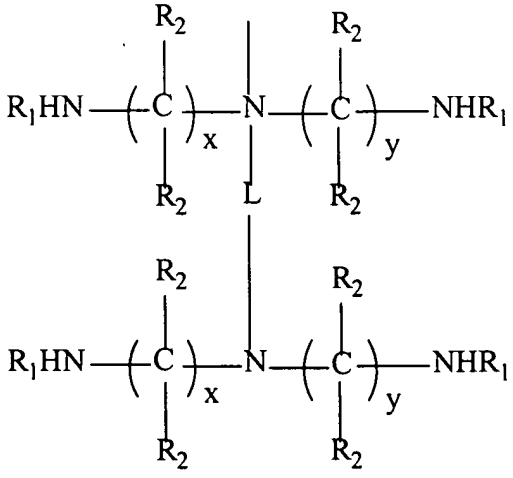
35. The synthetic derivative of claim 34 wherein $x = 3$, R_1 is a hydrogen atom, R_2 is a methyl (CH_3) group for the carbon atom located next to each NH-R_1 group, and is a hydrogen atom for all other carbons and $w = 4$.

36. A synthetic derivative of a polyamine comprising Structure 3:



37. The synthetic derivative of claim 35 wherein L is an aliphatic chain with a length of 2 to about 14 carbon atoms.

38. A synthetic derivative comprising a structure of a first polyamine chain and a second polyamine chain having a structure:



39. The synthetic derivative of claim 38, wherein the chemical linker is a α,ω-diamine cross-linker.

40. The synthetic derivative of claim 38 wherein the chemical linker is further defined as an alkyl chemical linker.

41. The synthetic derivative of claim 38, wherein R_1 is H, x is 3 or 4, y is 3 or 4, and x + y is greater than 5 and less than 9.

42. The synthetic derivative of claim 38 wherein L is an aliphatic carbon chain having a structure C- (CH_2) η, and η is greater than 2 and less than 10.

43. The synthetic derivative of claim 38 when L is xylene.